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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,908	02/28/2002	Maxim A. Bolshtyansky	1-14	2903

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EXAMINER

NGUYEN, TUAN N

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A7X

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/084,908	BOLSHTYANSKY ET AL.
	<b>Examiner</b> Tuan N Nguyen	<b>Art Unit</b> 2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 October 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1, 3, 5-8, 11-12, 14, 16- 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1, 3, 5-8; 11-12, 14, 16- 17 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 February 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

*Pawel J*  
PAUL IP  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____                                     |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of 35 U.S.C. 102(b) which forms the basis for all obviousness rejections set forth in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 3, 5, 8, 12, 14, 17 are rejected under 35 U.S.C. 102(a) as being unpatentable over Holcomb et al. (US 6456637).

With respect to claims 1, and 12 Holcomb et al. '637 shows in figures 3, 2a-e, and discloses in the ABSTRACT an optical fiber laser comprising: a rare earth cladding pumped optical fiber (Col 2: 39-44) and a laser cavity defined by first and second reflective devices as fiber Bragg grating (Fig 3: 21,22); a multi-mode pump source, and a combiner having at least first second and third ports where multi-mode pump source is operatively coupled to first port of combiner (Col 2: 44-67); and the combiner comprising a tapered fiber bundle configured to couple pump light from the multi-mode pump source into the laser cavity utilizing mode-based coupling without the use of wavelength-based coupling. (Figures 2a, 3) (ABSTRACT, Col 1: 40-45). Since claim 12 recites the same or identical elements/limitations it is inherent to use patents ('637) to recite the method for combining laser light with pump light in an optical fiber laser device, product by process.

With respect to claims 3, 5, 8, 14, 17 Holcomb '637 discloses the cladding includes a rare earth doped core (Col 2: 39-44), the first and second reflective devices as fiber Bragg grating (Fig 3: 21,22), and where the lasing medium comprises a single-mode fiber (Col 2: 55-60).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

4. Claims 6, 7, 11, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holcomb et al. (US 6456637) in view of Alphonse et al. (US 6363088).

Holcomb et al '637 discloses the above, and the claims further require that the fiber Bragg grating has high index coating, wherein the first and second reflective devices comprise at least one of a dielectric film mirror, an interference filter, a broad metal mirror, or a polished fiber end, and the optical fiber laser is bidirectionally pumping. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, in this case the grating has high index coating and polished fiber end. *In re Aller*, 105 USPQ 233. or It has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as

before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184. In addition, Alphonse '088 discloses an optical system with optical pump coupled to rare earth cladding fiber, having grating and bidirectionally pumping (ABSTRACT, Col 6: 65-67, Col 7) (Col 3: 12-15; Col 6: 65-67; Col 11: 42-55). It is within one skill in the art to provide Holcomb '637 the teaching of Alphonse to have the system pump bi-directionally, since it is a mere duplication of parts and operation.

*Applicant's argument is in moot in view of the new ground rejection.*      *Communication Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (703) 605-0756. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Tuan N. Nguyen



  
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